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DETROIT

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · MACHINERY · PARTS · ACCESSORIES · TOOLS

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First Copy

Bad Showroom Lighting Costs Car Sales

Domestic Production of Passenger Cars in Jan. And Feb. Passes Last Year

Output of First Two Months, in Spite of Banking Troubles, Shows 205,678, Against 200,397 in 1932

Washington, March 30.—The Bureau of Census today announced revised production figures for the automotive industry for February. Total domestic and Canadian output for February, 1933, was 110,112 vehicle units. This compares with an output of 122,895 in February of last year. Considering the general conditions, banking holidays in many states, with Michigan banks shut down for two weeks of the month, this showing is considered extremely good.

For January and February this year production in the United States surpassed the same period of 1932 by a small margin. The total output this year was 236,928 units, against 236,762 in this two-month period of 1932. Canadian production, however tipped the balance the other way with 6,656 this year, against 9,208 in January and February, 1932.

Breaking down the production figures we find that passenger cars turned out in the first two months this year, in spite of all business handicaps, exceeded the output in the same period of 1932 by 5,281 units. The total in the first two months this year was 205,678 passen-

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N. B. M. A. ANNOUNCES SPRING CONVENTION DATES AS MAY 1-2

New York, March 30.—The spring convention of the National Battery Manufacturers' Association will be held Monday and Tuesday, May 1 and 2, at the Brown Hotel, Louisville, Ky.

W. J. Sandman, of the Advance Battery Manufacturing Company, Louisville, as chairman of the arrangements committee, is working out a very interesting and efficient program. The regular conference days, May 1 and 2, will be pre-

(Continued on Page 3)

STUDEBAKER INCREASES PAYROLL TO OVER 2,000

South Bend, Ind., March 30.—The Studebaker Corporation has gradually been increasing employment at its various plants here. During the week additions have been made to the working force until upward of 2,000 people are now back at work. This is approximately a third of the force that was employed prior to the declaration of the banking holiday.

H. S. Vance

A gratifying flow of orders has been coming in to the sales department. During the week that ended March 25 more than 600 orders for cars were received from dealers in

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REO ADDS 22 DEALERS AND 4 DISTRIBUTORS

Detroit, March 30.—Four new distributors and twenty-two new dealers have acquired the franchise to handle Reo passenger cars and Reo speed wagons, according to announcement by Elisha G. Poxson, general sales manager of the Reo Motor Car Company. H. K. Fisher and L. Clee Ward, partners in the Wichita, Kan., Reo distributing organization, the Fischer-Ward Motor Company, are both widely and favorably known in business and southwestern automotive circles. In addition to the city of Wichita, their territory includes forty-two counties in Kansas, six in Oklahoma and one in Texas.

E. G. Poxson

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BATTERY GROUP PASSES RESOLUTION

Cleveland, March 30.—The industry committee appointed at the Automotive Replacement Battery Manufacturers' Trade Practice Conference, held in Cleveland last November, held a meeting here and considered matters of general interest to the battery industry.

Members in attendance were C. P. Bowers, president of Bowers Battery Manufacturing Company; D. A. Graham, president of Red-Bar Battery Company; A. A. MacLean, vice-president of U. S. L. Battery Corporation; R. D. Mowry, president of Universal Battery Company; C. O. Wanvig, president of Globe-Union Manufacturing Company, and Louis

(Continued on Page 8)

FEBRUARY EMPLOYMENT AND PAY ROLLS UP

Washington, March 30.—Employment in manufacturing industries increased by 1.6 per cent. in February as compared to January, while pay rolls increased by 1.7 per cent. This compares with the average

(Continued on Page 8)

Four-Fifths of Sales Are Made Evenings When Lighting Counts

Sales Value of Striking Color Combination Is Lost in Many Cases Due to Poor or Improper Illumination, Experts Agree

By CHRIS SINSABAUGH

Detroit, March 30.—A sales manager told me the other day that three out of every four automobile sales are closed at night. Much of the preliminary sales work has been done before, but it's in the evening when the man who pays and the woman who chooses visit the salesroom for a final once-over before making the momentous decision. Then its when the paint job becomes, in many instances, the deciding factor.

How many dealers are cashing in on the beautiful color effects of today's automobiles, which have cost manufacturers small fortunes to produce through modernization of methods? Insufficient lighting of salesrooms, it is said, robs dealers of one of their most effective arguments in closing deals in which the color of the car is the stumbling block to getting the name on the dotted line. Shadows thrown by insufficient or improper lighting often spoil color effects.

It was the reaction of body engineers and color experts to the talk of George W. Styles on "Color Theory and Analysis" at the Scarab Club dinner the other night, when the consensus of opinion was that automobile dealers are not paying sufficient attention to properly lighting their salesrooms that caused this writer to dip deeper into the subject—that and the sales manager's statement that most car sales are closed at night.

There were two sources of information available—an expert who could tell me something about scientific lighting and one who knows his colors. Richard Clover, illumination specialist of the General Electric Vapor Lamp Company, was the authority on lighting whom I

(Continued on Page 2)

REVENUE BUREAU HOLDS ALL TRUCK PARTS AND ACCESSORIES TAXABLE

New York, March 30.—The National Automobile Chamber of Commerce in a bulletin sent to all members and signed by Alfred Reeves, vice-president, states:

All the articles, excepting commercial commodities and raw materials, listed in the parts catalogue of a large truck manufacturer have been ruled taxable by the Bureau of Internal Revenue.

Replying to a request for a specific ruling on the articles listed in the truck maker's catalogue, the commissioner of internal revenue said:

"Reference is made to your parts catalogue, submitted for the purpose of having the bureau determine the taxability of the articles listed therein.

"You are advised that Article 41 of Regulations 46 provides in part as follows:

"'The term "parts or accessories" for an automobile truck or other automobile chassis or body, or motor cycle, includes (a) any article, the primary use of which is to improve, repair, replace or serve as a component part of such vehicle or article, (b) any article designed to be attached to or used in connection with such vehicle or article to add to its utility or ornamentation, or (c) any article, the primary use of which is in connection with such vehicle or

(Continued on Page 4)

N. Y. MERCHANTS ASS'N HOLD BUSINESS MEETING

New York, March 30.—The annual business meeting of the Automobile Merchants Association of New York, Inc., was held yesterday.

C. B. Warren, president of the association, presided and the meeting was very well attended. Dealer members, having the power to vote,

C. B. Warren

A. G. Southworth

(Continued on Page 3)

FEBRUARY TRUCK SALES OFF 35% IN 37 STATES

Detroit, March 30.—R. L. Polk & Co. today released commercial vehicles sales returns for February in thirty-seven states and the District of Columbia, showing 7,826 this year, against 12,114 last February.

This total represents a decrease for February, 1933, under the same month last year of somewhat over 35 per cent. The total sale of commerical vehicle units in February last year was 14,522. If the ratio of decrease this year holds good in the nine states still to report, the total for February, 1933, will be about 9,500 commercial cars.

In the territory so far reporting just one state managed to show a gain in commercial car sales over last year. This was North Carolina, which had 230 sales against 205 last February. One make of truck showed a gain, Diamond-T, which sold 159 units this year against 155 in February, 1932.

Commerical vehicle manufacturers in the Detroit territory are inclined to hope that sales to the brewing industry, which must have promptly a considerable volume of equipment, will enable the truck division of the industry to better its position within the next ninety days.

PACKARD ANNOUNCES NEW FORMAL SEDAN

Detroit, March 30.—The Packard Motor Car Company has announced a new body type in what it calls a Formal Sedan.

The new car fills the gap between a sedan and limousine. It can be either an owner or chauffeur-driven car at will. A few turns of an easily operated handle in the rear compartment completes the change from one to the other.

This handle raises a wide glass partition from a cleverly concealed pocket in the back of the front seat when a limousine, or chauffeur-driven car, is desired. The glass slides in channels in the door pillar

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DE COZEN RE-ELECTED NEWARK A. T. A. HEAD

Newark, N. J., March 30.—Alfred De Cozen, president of the De Cozen Motor Car Company, Chrysler distributor, was re-elected to the presidency of the Newark Automobile Trade Association at the annual convention and election of officers of that organization held at the Newark Athletic Club, last night.

Other officers elected were Glenn W. Tisdale, first vice-president; Frank J. Fanning, second vice-president; Joseph C. Bell, treasurer. Frederick W. Ehrlich, George F. Fischer and Garrett S. Boetsma were elected trustees for a term of three years.

The report of President De Cozen for the fiscal year just closed indicated that the local automotive trade association is in a sound and healthy condition. Preliminary plans were outlined for the annual convention of the New Jersey Automotive Trade Association, which will be held in this city early in May, at which time dealers from all parts of the state will be guests of the local association.

BAD SHOW ROOM LIGHTING COSTS DEALER CAR SALES

(Continued from Page 1)

sought, while Howard Ketcham, director of the Duco Advisory Service, was the other contact.

Clover, located in the company's Detroit office, naturally knows his stuff, because of the missionary work he has done among the factories, which are saving from 10 to 25 cents per body through the use of his scientific lighting in spraying booths. The Cooper Hewitts, which detect the poor paint jobs, not only save 10 per cent. in lacquer, but cut down the number of repaints and rejections.

So let's talk first to Clover, who has at his tongue's end the results of the experimental research work of such nationally known illumination engineers as Arthur Brainerd of the Philadelphia Electric Company, and W. R. Flanders of the General Electric Vapor Lamp Company, which, coupled with his own experiences, qualify him as an authority.

"In advancing the belief that automobile salesrooms are not properly illuminated to get the best results out of the color schemes of the present-day automobile, let me bring into the picture the commercial photographer," said Mr. Clover. "When he prepares a polished metal object to be photographed, the first thing he does in preparing his subject for the camera is to smear a light film of putty over the entire surface. This serves to dim the images caused by the light sources. If this were not attended to, the object would appear distorted and would be difficult to recognize in an advertising illustration.

"This same blurred effect is produced when a car is incorrectly illuminated on a showroom floor. The mirror-like Duco surfaces tend to trap the light images. This disadvantage can be effectively enhanced by the simple expedient of properly controlling the source of the illumination. With the right light distribution, diffusion and direction, there can be no distorting light images and shadows. If properly handled, as many as 150 light sources can be used advantageously in a single exhibit.

"Research on the part of my colleagues and myself have convinced us that the time is ripe for automobile dealers to give considerable attention to the matter of properly lighting their salesrooms. It's important.

"There are four big factors in lighting showroom exhibits, and they are: (1) Thorough diffusion of light to eliminate glare, shadows, hilation and reflected images of intense light sources. (2) The intensity of the light should be very high to produce a penetrating effect. (3) The direction of the light. This depends on the contour of the body and its arrangement. (4) The color of light.

"Individual car displays in a showroom can best be illuminated by a combination of Cooper Hewitt and Mazda bulbs in vertical canopies with flash opal glass fronts, which will eliminate glare, shadows and spotted images of light sources on a body. Cars lighted in this fashion invite inspection because the eye is not fatigued. The combination of Mezda and Cooper Hewitt lamps in modern fixtures produces more light at a lower expense than any other system.

"In many automobile salesrooms it appears to be a common practice to equip the interiors of the rooms with costly and ornate fittings and to give little or no thought to the valuable window display possibilities. Where provisions are made for window illumination, the most accepted method is a system of built-in reflectors to project intensified beams downward toward the car. This practice invariably results in a series of highlights caught by the polished curved surfaces of the car, and, admitting the truth of the first law of optics, that the eye seeks the light source, the prospective buyer, standing on the other side of the plate glass, is apt to concentrate his gaze on these specular reflections rather than upon the beauty of design, the Duco finish, the richness of the upholstery and the details of the ensemble.

"Two entirely new features in automobile showroom lighting are recommended by the General Electric Company: 1. Lighting from the floor and sides. In this way, objectionable highlights reflected from fender crowns, curves of hoods and radiator shells, edges of window sills and curves of door panels are eliminated. 2. A two-to-one blend in wattage of Mazda bulbs and Cooper Hewitt tubes offers a 'color' of light closely approximating daylight. Intense and carefully diffused artificial daylight is eye arresting to passers by. Automobiles can thus be made to stand out in bold relief as though encased in a huge frame."

With this groundwork laid by Mr. Clover, your reporter called on Mr. Ketcham to add his contribution. But before doing so he conducted a series of tests at the Scarab Club in co-operation with George W. Styles and Frank C. Packman of the color research group of the Scarab Club. They used a 250 watt incandescent light behind red, green and purple blue gelatin fillers for illuminating panels representing the fourteen color families examined for Automotive Daily News' survey.

As a result of these tests, the findings of which are shown in an accompanying table, Duco's expert tells us, putting emphasis on the proper illumination on the season's most popular automobile colors, maroon and blue, that—

"Because of the importance of light in affording the visualization of color, proper display room illumination pays. An account of some of the illusions unbalanced lighting produces will serve to illustrate some of the penalties faulty lighting imposes.

"Maroon, a low value of red, one of the most popular car colors today because of the recent development of beautiful, full-strength colors in this hue, formerly failed to appeal because of an objectionable orange or brick tone quality. But even the most perfectly balanced maroon car can be made to appear at a disadvantage. Because the hue of any color is dependent upon the wave length of the light source reflected from its surface, any light source that casts a preponderance of one color at the expense of the remaining spectral colors is unbalanced and will distort the appearance of any colored object it illuminates. Long wave length, such as red, orange and yellow rays of light, have a tendency to flatten out a color.

"Maroon, as will any color, appears to best advantage under good daylight conditions. Incandescent light, because it intensifies and reflects a preponderance of red and yellow rays and a minimum of blue, is unbalanced and tends to impart a distorted effect to a colored surface. In the case of maroon, the preponderance of red and yellow rays reflected produces an orange tint. Orange or bricky characteristics in maroon generate sales resistance.

"The color supplier has imparted all the skill at his disposal to counteract this undesirable off-color tendency in his maroon products. This development will not serve to the fullest its sales promotional possibilities if its ineffectiveness when displayed at night is depreciated. Under mercury-vapor light maroons lose identity because this light contains no red rays.

"Blue light on maroon tends to lower the apparent value of the pigment. Under incandescent light, light maroon will be intensified so that it appears red, whereas, under mercury vapor light, a light maroon appears considerably darker in value. Red does not suffer so much under incandescent light as does blue. Purple blue, under incandescent light, becomes very dark and looks more green than blue because of the deficiency of blue rays in this type of light. Under mercury vapor light, blue looks blue and can easily be distinguished from black.

"The lowest value colors, regardless of hue, appear black under incandescent lighting. In general, wherever light is colored, its tints modify the appearance of everything it illuminates.

"Blue north sky light, between 10 a. m. and 2 p. m. on a clear day, is considered ideal for viewing colors. Although we cannot control nature's best lighting condition at will, advantageous use can be made of balanced light. Light produced by incandescence has an excess of red, orange and yellow rays. Mercury vapor light has an excess of green, blue and violet. A light has been made available, however, that gives nearly true daylight results. It is a combination of incandescent and mercury vapor lights on an equal wattage basis.

"The natural beauty and distinction of cars finished in the new series of Calibrated Duco colors will appear to best advantage at night in the dealer's showroom if color-corrected lighting is made use of."

SPRING IS HERE— LAKE STEAMERS RESUME

Detroit, March 30. — Calendar dates and the return of the robin are less dependable harbingers of spring than is the announcement today by the Nicholson Steamship Company of the resumption of its fleet of eleven lake steamers on April 1.

Nicholson steamers operate between Toledo, Cleveland, Buffalo, Oswego, Green Bay, Milwaukee, Kenosha and Chicago, with daily service between Detroit and Cleveland.

Officials of the company stated today that they are looking forward to increased shipment of automobiles this year, coupled with increased activities generally due to the revival in the brewing industry. The flagship of the fleet this year is the steamship Coralia, with a capacity for 475 automobiles.

FINANCIAL NEWS

WESTERN ELECTRIC

New York, March 30. — Weston Electrical Instrument shows net loss of $143,353 after taxes and charges for 1932, compared with net profit of $122,264 in the preceding year.

LINK BELT

Chicago, March 30.—Link Belt declared a quarterly dividend of 10 cents on the no-par common stock, against 20 cents paid previously. Payment is due June 1 to holders of record March 15.

SLOSS-SHEFFIELD

New York, March 30.—Sloss-Sheffield Steel and Iron for 1932 shows, as certified by independent auditors, net loss of $956,312 after taxes, interest, depreciation, depletion, etc. This compares with net profit in 1931 of $79,342, equal to $1.18 a share of 67,000 shares of 7 per cent. preferred stock.

FAILURES

New York, March 30.—Failures in the week ended March 23 totaled 393, compared with 382 a week before and 626 during the 1932 period, according to Dun & Bradstreet, Inc. Retail insolvencies were fewer, but the total for wholesale and jobbing, manufacturing and other commercial units increased.

LEAD PRODUCTION

New York, March 30.—World lead production in February totaled 95,408 short tons, against 104,932 tons in January and 112,290 tons in February, 1932, the American Bureau of Metal Statistics reports. United States production in February was 20,432 tons, against 24,615 tons in January.

CRUDE OIL OUTPUT UP; IMPORTS SLIGHTLY OFF

New York, March 30.—The American Petroleum Institute estimates that the daily average gross crude oil production for the week ended March 25, 1933, was 2,249,650 barrels. Daily production for the four weeks ended March 25 averaged 2,159,950 barrels.

Imports of petroleum at principal United States ports (crude and refined oils) for the week ended March 25 totaled 787,000 barrels, a daily average of 112,429 barrels, compared with a daily average of 176,286 barrels for the week ended March 18, and 154,536 barrels daily for the four weeks ended March 25.

SPARKS *from* DETROIT

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Show Your Wares

* * *

Banks and Bankers

* * *

Spring Is Here

* * *

A Smart Move

* * *

Chris Sinsabaugh
Detroit Editor

WHAT I hear from one of my outside scouts sorta clicks with the story in the column the other day, that dealers are not cashing in on the sales possibilities of fine paint jobs because of inefficient lighting of their salesrooms. Only in this instance, another phase is mentioned.

My informant tells me that the automobile dealers in any city are larger buyers of plate-glass insurance than any other line of business. Even a most casual check-up reveals that to be a fact, but—my scout tells me—the automobile dealer makes less use of his show windows than any other merchant. He says the car dealer places his display cars too far away from the window glass, whereas the dry goods merchants, hardware dealers and even bakeries and confectioners place their merchandise right up in front of your eyes.

In other words, they put their goods where one can see them, and a real desire to buy is created.

* * *

THE TEMPEST IN THE TEAPOT occasioned by General Motors going fifty-fifty with Uncle Sam in the establishment of the new National Bank of Detroit seems to be over. Consequently the local situation has been vastly improved. We no longer think the world is coming to an end, and we read reports of sales activity in the automobile industry outside of Michigan, and we have a new lease on life.

General Motors, you'll remember, chipped in a cool twelve and a half millions, and, with confidence restored, several of the other big concerns in the automobile business have lined up as depositors. The Chrysler Corporation dropped in $4,000,000, the Ford Motor Company deposited $1,000,000, General Motors put in $1,000,000, Packard $200,000, Campbell-Ewald also $200,000 and Bendix $75,000.

* * *

SOME TWO OR THREE YEARS AGO Charles S. Mott, vice-president of General Motors, saved the Union Industrial Trust and Savings Bank of Flint when a big shortage was discovered by coming across with a couple of million dollars of his own. He was made chairman of the board of the bank. Like many others, the bank has been closed, and now, showing some people's gratitude, Mr. Mott has been made a target in a stockholders' suit and blamed for the bank's big losses.

* * *

MARCH AND APRIL in past years always have been the months when spring showings of cars have taken place. This year the only show window in town that I have seen dolled up for spring has been the main Chevrolet store in the General Motors Building. In this store the flowers this year, for obvious reasons, are not real blossoms. Instead, an artist was called in, who painted the flowers on the windows.

* * *

A YEAR AGO the column had a story about the old-time money (large-size bills) coming out of hiding in payment for cars. Right today cash payments for automobiles, not only by local buyers but from out-of-town dealers as well, reveal the fact there still is a lot of "big money" coming out of hiding. But it still is legal tender.

* * *

B-O-P IS DOING A SMART THING, I hear. Over the signature of W. A. Blees, sales manager, literature has been sent to filling stations and service stations—there's said to be 143,000 of them in the country—containing a letter from Mr. Blees, who tells the station owners that, inasmuch as they are the real points of contact with owners, he is sending each a chart showing how a Pontiac should be properly greased and telling the right grease and oil to use. Another page gives the leading mechanical features of the Pontiac, so the station owner will be primed to talk shop to customers who ask about the Pontiac. It is understood that Oldsmobile and Buick will be handled in the same manner.

Retail Salesmen — This Is Your Page

This department is devoted to the interests of the retail sales division of the industry. Salesmen, this is your department. Automotive Daily News wants you to get something from this department that will help you in your work on the firing line. It wants you to pass on your own experiences, success, failures to help your brother salesmen. Send in your story in the form of a letter, or even a postal card, and let us get it ready for publication. Your achievement or your mistake may help another salesman to make sales or avoid errors that cost you commissions.

Dealers read this page. Give us the benefit of your reactions on these problems that affect the work of your salesmen, the men on the firing line, the men who bring home the bacon or don't.

IS YOUR SERVICE STATION READY FOR MILADY'S CAR?

In the automotive sales field, dealers and distributors have long been convinced of the fact that to sell the car you have got to sell the woman. In these United States women exert a disproportionate effect on sales of almost everything. The American home centers around the woman who runs it. The master of the house does the paying, directly, but he never fails to consult his wife, mother, sister or daughter, as the case may be, before he makes a selection.

This same fact applies to the job of selling service to the woman who drives the car. During most of the hours of the day it is the woman and not the man who drives the family car. It usually falls to her to bring the car into the service station to have the ordinary service jobs carried out.

Now the ladies are funny in some ways; they will not patronize a shop of any kind that is dirty, dingy and generally repellant. They like cleanliness and order in a service station as well as in a tea-shop or restaurant.

In the current issue of Prest-O-Lite News Letter, a writer comments interestingly on this phase of service work and of the necessity for being ready for milady when she comes to have service work done:

A shrewd merchant once said, "A woman will waste three hours shopping around for an item that she could buy in three minutes—yet she resents having to wait three seconds before getting attention — even though all she wants is to exchange something. You can't handle women customers like you do men."

That last statement is as true of the service station as it is of the store.

For a woman is a peculiar creature. Her nerves are often on edge. She is apt to take offense at things which a man would take for granted.

Since she always associates grime with disorder, it is hard for her to realize that a dirty shop is not inevitably also an inefficient one. So no matter how difficult it may be to keep your battery department clean, if you want your women customers to call again, at least keep it orderly.

Take care that nothing occurs in your shop which might damage a lady's car or clothes. Women are much more particular about their possessions than men, much more insistent and extravagant in the claims they make for minor injuries, much more industrious in spreading damaging reports about an institution which fails to satisfy their demands following such an injury.

Therefore, partition off your battery work room to keep the public out of it. Do not leave old batteries standing where a coat or skirt might brush against them. Caution all service men to be careful to put hydrometers back into their battery kits the moment they have finished with them.

Above all, see to it that every battery service man ALWAYS has in his kit a bottle of household ammonia or a solution of ordinary baking soda and a clean cloth. Then if acid does spill on a customer's property it can be quickly neutralized.

After testing a battery ALWAYS clean off terminal corrosion.

Women, especially, appreciate this extra cleanliness.

If you have to sit in a car, first place a clean cloth or paper on the seat, and if you re-use this, not only take care to get the clean side next to the upholstery but let the customer see that you have done so.

If you get a smudge on the car or window, wipe it off at once, and always wipe off the steering wheel after you have touched it. If not too rushed, clean the windshield and rear window of each car before it is driven away.

Because most women do not want to burden their minds with technical data or scientific terms, always use simple, understandable expressions in describing to a woman the operation of a battery. But be careful to do it in a natural, unaffected manner—women resent being made to feel inferior.

Keep your place bright and attractive; windows and displays colorful and clean.

Do all of these things and you will not only get more business from women drivers, but from the men as well.

GLASS PLANT RESUMES

Toledo, O., March 30.—Resumption of manufacturing activities at the Charlestown, W. Va., plant of the Owens-Illinois Glass Company has been announced here by William E. Levis, Toledo, president of the company, in his annual report to stockholders. The Charlestown plant, largest of the company's twenty factories, normaly employs between 800 and 1,000 men.

N. B. M. A. ANNOUNCES SPRING CONVENTION DATES AS MAY 1-2

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ceded by a meeting of the industry committee on Sunday afternoon and a meeting of the administrative committee on Sunday evening, April 30.

The regular industry conference session will start Monday morning, May 1, and will be attended jointly by members of the N. B. M. A. and all others engaged in the battery industry. Monday afternoon will be devoted to an address given by the president of the association, E. D. Martin, which will be followed by the treasurer's report and regular committee reports, particularly the more active committees, such as the guarantee committee, rebuilt battery committee and compensation insurance committee.

On Monday evening there will be a dinner, followed by an informal smoker, during which a general discussion of the industry and battery problems will afford everyone the opportunity of interchanging their views on many subjects.

Tuesday morning, May 2, will be devoted to the completion of committee reports and unfinished business.

The week beginning May 1 is Derby week and, aside from the track privileges that will be extended to those attending the convention, the feature entertainment to be held Tuesday afternoon will be the running of the N. B. M. A. handicap.

N. Y. MERCHANTS ASS'N HOLD BUSINESS MEETING

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and comprising the passenger car and motor truck dealers and distributors, were present either in person or by proxy.

The chairman of the various committees rendered their reports.

A. G. Southworth, chairman of the nominating committee, submitted for the consideration of the dealer members present the following ticket of candidates: William L. Colt, Dodge Motors, New York, Inc.; Lee J. Eastman, Packard Motor Car Company of New York; E. W. Headington, Stutz New York Company, Inc.; Theodore Luce, Theodore Luce, Inc.; Arthur Randall, Cadillac Motor Car Company, and G. O. Simons, Simons Stewart Company, Inc., who were then elected to serve on the board of directors for a period of three years.

The officers of the Automobile Merchants Association of New York, Inc., for 1933 will be elected at the next meeting of the board of directors.

Our Leading Dealers and How They Got That Way

A series of brief biographies of outstanding motor car and truck merchants.

By L. T. PATTERSON

President, L. T. Patterson Company, Cincinnati, O.

Once again we have a biography, this time an autobiography as a matter of fact, of a man who came into the automotive dealer field by way of the buggy business, which gave us so many distinguished executives in the pioneering era of the industry. Readers, meet L. T. Patterson, who sells Chrysler and Plymouth cars to the good burghers of Cincinnati and environs.

"This is my first attempt to look back over a period of years and to jot down in a few words some of the ups and downs and experiences that came to me during my career in the automobile dealer field.

"I entered the automobile field by way of the buggy business, having been employed by the Haydock Carriage Company in 1912. This organization watched the growth of the automobile industry, and finally decided to put out the Haydock Four. This venture did not last very long, but it was long enough for me to get the automobile fever in a virulent form. In 1916 I made a connection with the Oakland-Page distributor in this bailiwick, and I stayed with the company for nine years. During that period I was accountant, retail sales manager, wholesale manager, secretary-treasurer, and finally general manager.

"Those were the days of large territories, and we built up a very fine organization, distributing our lines in parts of five states. Of course, during this period, 1916 to 1927, the Pontiac was introduced and met with considerable success. During my years in this company we handled over 30,000 new and used cars.

"In January, 1928, I formed the L. T. Patterson Company and obtained the Chrysler and Plymouth franchises. This move has proved to be a profitable and pleasant connection.

"Whatever success I may have attained in the motor car business is due primarily to the fact that I have a distinct liking for the business. I have been constantly on the job, sincerely trying to get results in every department of our business, and, above all, keeping a proper and adequate record of transactions departmentally.

"I am confidently looking forward to some of the best years in this business."

fall when Mr. Lewis came west, is his report.

* * *

During the period since the bank holiday, March 14-March 22 inclusive, new car sales in King county (Seattle) showed a marked increase over corresponding period of 1932. Sales this year, 210 compared to 146 a year ago. No wonder the dealers are looking for a good April.

DODGE APPOINTS HARRISON AS ATLANTA DEALER

Atlanta, Ga., March 30.—J. M. Harrison & Co., Inc., leads the list of recent dealer agreements reported by Dodge Brothers Corporation in this section. The firm, officered by J. M. Harrison, president and treasurer, and John W. Young, secretary, is an old and well-known concern, having been founded fifteen years ago, when Harrison first engaged in the marketing of used cars. The company's offices, showrooms and service shops are located at 111-117 Ivy St., Atlanta. Under present plans, J. M. Harrison & Co. expect to market during the remainder of 1933 close to 1,000 Dodge and Plymouth passenger cars and Dodge trucks.

DEALER DOINGS

SEATTLE, WASH.

Henry Veale has been apointed assistant sales manager and used car manager for S. L. Savidge, Inc. He has been in similar work in Seattle and Portland for the past eight years, and for five large Portland dealers formerly operated the Used Car Co-Operative Market in Portland. This was the largest used car establishment in the northwest, covering a full block.

* * *

Walter C. Hilligos, since 1912 in automotive lines here, has been appointed sales manager of the University store of Eldridge Motors, Inc.

* * *

K. B. Lewis, handling Pacific Coast for Franklin Automobile Company, here last week looking over the field. Best outlook since last

Nash Announces Sixteen New Dealer Appointments

Kenosha, Wis., March 30.—The following new dealers have been appointed by the Nash Motors Company, it was announced today by C. H. Bliss, vice-president and director of Nash sales:

Franklin Street Garage, Franklin and Thames Streets, Bristol, R. I.; Chestnut Hill Garage, 115 Chestnut St., Clinton, Mass.; James Motor and Service Company, 175 Taunton Ave., East Providence, R. I.; Willimantic Garage, 35 North St., Willimantic, Conn.; C. R. Hill Motor Company, 403 West Chestnut St., Dodge City, Kan.; Howard L. Taylor, Inc., Richmond Hill Avenue, Stamford, Conn.; Laramie Nash Company, 3d and Custer Streets, Laramie, Wyo.; Jefferson Motors Company, Inc., 323 South 20th St., Birmingham, Ala.; Jacobs Motor Sales and Service, Okawville, Ill.; J. A. Gross Motor Car Company, 1042 Gilbert Ave., Cincinnati, O.; East 71st Street Nash Company, 4173 East 71st St., Cleveland, O.; O. H. Bond Motor Company, Parsons, Kan.; Piquette's Garage, 110-14 Jackson St., Waukegan, Ill.; William Hintz Garage, 487 Washington St., Burlington, Wis.; St. Paul Nash Motors, 217-231 West 6th St., St. Paul, Minn.; Capitol Motor Company, Inc., 212-214 East Capitol St., Jefferson City, Mo.

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"Of, By and For the Entire Automotive Industry"

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AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION

350 Hudson St., New York, N. Y.

O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary

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FRIDAY, MARCH 31, 1933

ADVERTISING AND BUSINESS HEADQUARTERS

Harry A. Tarantous, Business Manager. 350 Hudson St., New York, N. Y.
B. B. Crighton, Assistant to Business Manager

George M. Slocum, Manager, Detroit Bureau, 427 Fisher Building, Detroit, Mich.; phone Trinity 2-3500. Willard R. Cotton, Western Manager, 333 North Michigan Ave., Chicago, Ill.; phone Andover 2400. Metz B. Hayes, New England Manager, Little Building, Boston, Mass. Blanchard, Nichols & Coleman, American National Bank Building, San Francisco, Cal.; Lincoln Building, Los Angeles, Cal.; 1037 Henry Building, Seattle, Wash. Address ALL Advertising and business correspondence to 350 Hudson St., New York city.

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350 Hudson St., New York, N. Y. Telephone CA-nal 6-1000
Alexander Johnston, Editor William C. Callahan, News Editor

Statistical Department (registration and specifications), P. J. Robas, statistician. Engineering Department, Herbert Chase, engineering editor. Merchandising Department, Charles S. Zack, editor. Art Department, John Bauerfeld, director.

Detroit Bureau, Chris Sinsabaugh, editor, 427-8 Fisher Building, Detroit, Mich. Telephone Trinity 2-3500. Contributing editor, John C. Wetmore.

Service the Sole Commodity

ERNEST J. P. BENN, the well-known British writer on economic subjects, recently made the remark: "However much a man may want to make money, however depraved may be his liking for money, he is, under the profit system, altogether powerless to get hold of a sixpenny piece until he is willing to render some acceptable service at a price they will willingly pay for it."

Analyze business of any kind, from hair dressing to selling a $10,000 automobile, and what lies behind it? Nothing in the world but service. The hair dresser charges for his skill in making a head of hair attractive, to the owner at any rate. The salesman who persuades a buyer to contract for a $10,000 automobile is selling a de luxe brand of motor transportation, a service, which the buyer considers acceptable enough to justify the price he is paying.

Obviously enough, the hair dresser, or the butcher, or the trolley company, or the clothier, or the doctor, or the lawyer, or the minister, or any other type of seller, tries to make the service of which he is disposing attractive enough to encourage repeat orders. Any merchant worthy of the name wants and tries to build up a clientele of steady buyers. The man who would depend on one-time buyers would have a very uncertain business on his hands and one likely to collapse at any moment.

Conditions peculiar to the automobile selling field for many years caused retail merchants to limit their interest to the sale of original service. They forgot all about repeat sales, and, after the market sales and everything else except the desire to sell their original service, new motor transportation, to as many new customers as they could dig up from a vast and waiting public.

As a matter of fact, there are few businesses in the world which offer as many opportunities for sales of service after the original contract has been fulfilled, as does the retail automobile selling field.

The value of the motor vehicle, the only reason any one wants its service, is that it is an ambulatory unit, moving people or goods from place to place. From the very day that the service of a motor vehicle is bought there are other services needed to keep it moving. It must have fuel to enable its engine to run. It must have oil to keep its moving parts from destroying themselves. It must have tires to carry it over the roads with reasonable freedom from vibration that would otherwise quickly shake the whole mechanism apart.

Then, when time takes its toll and in spite of good and reasonable care, some part, some mechanical unit breaks, it must have a replacement for that part and the service to install it. Compared with most other products of commerce, the demands of the motor vehicle for service to enable it to perform its obvious functions are astonishingly great and nearly continuous.

It is obvious, then, that the retail merchant who sells a new car to a customer has sold simply an original service, with even more important demands for secondary service operations to come. Is the merchant who confines his interest to supplying the demand for original service particularly wise? He is about as perspicacious as the man who eats his soup and lets the rest of the dinner be carried away.

By slow degrees automobile dealers are learning the truth of this; they are realizing that they have been confining themselves to the soup and giving the rest of the meal away to other people.

We need automobile dealers today who appreciate that they must sell service all the way across the board. They must sell new cars, handle used cars without destroying themselves in the process, furnish fuel, oil, batteries, tires and other equipment needed to keep every car they sell operating during its whole life. And they must furnish the prompt, efficient and economical service that gives their customers continuous motor transportation every day in the year.

REVENUE BUREAU HOLDS ALL TRUCK PARTS AND ACCESSORIES TAXABLE

(Continued from Page 1)

article whether or not essential to its operation or use.'

"The major parts of an automobile chassis, such as frames, engines, wheels, axles, springs, transmissions, steering gears and electrical units, are primily designed and adapted for use on automobiles and are so used. The major parts of an automobile chassis, when sold by the manufacturer thereof, are therefore clearly taxable within the meaning of the law and regulations. Likewise major body parts are taxable. As the regulations make no distinction between parts and accessories, any statement made relative to parts applies equally to accessories. In the case of the Universal Storage Battery Company, et al., vs. United States, the Supreme Court of the United States had occasion to decide the taxability of a part of any automobile part. In its decision of May 26, 1930, the court stated:

"'. . . the articles sold were gears, flexible shafts and flexible housings, all being replacement parts for speedometers used on motor vehicles. It is conceded that speedometers are accessories, but it is insisted that parts of a speedometer cannot be such. We think they can. The finding is that these parts were specifically designed, manufactured and sold for use on automobiles, and are not adapted to any other purpose or use. It is not questioned that when sold they had reached such a state of manufacture that they were adapted for ready replacement and use; so it is not as if the process of manufacture were not complete. A speedometer consists of distinct and separate parts, and we perceive no reason why one or more of these when manufactured and sold for the purpose shown by the finding should not take the same classification as speedometers.'

"The conclusion reached by the court with respect to speedometers and parts thereof applies with equal force to parts or accessories for engine, axles, steering gears, etc., used on automobiles. In accordance with the decision referred to above, all of the articles listed in your catalogues are taxable WITH THE EXCEPTION OF COMMERCIAL COMMODITIES AND RAW MATERIALS.

"The term 'commercial commodities' includes such articles as ball and roller bearings, bolts (except shackle and king bolts), nuts, washers, screws, nails, tacks, rivets, pins, studs, cotters, pipe fittings, such as plugs, tees, ells and elbows; drain cocks, grease cups, oilers, etc.

"The term 'raw material' includes such articles as cloth, leather, mattings, linoleum and similar articles sold by the yard; materials sold in rolls or by the foot, such as brake lining, anti-squeak, tape, binding, wires, cables, tubing, both metal and rubber, packing, conduits, etc.

"The foregoing enumeration of commercial commodities and raw materials is given for the purpose of illustration, and is not intended to be exhaustive."

PLANS PLANT ADDITION

Newark, N. J., March 30.—Peter Wendel & Sons, Inc., 171 Badger Ave., manufacturer of commercial wagons, trucks, parts, etc., has asked new bids on a general contract for a new one and one-half story addition, 100 by 300 feet, to cost over $50,000 with equipment.

COMING EVENTS

MARCH

27-April 1—New London, Conn. Automobile show, State Armory.

APRIL

12-27—Milan, Italy. International Automobile and Nautical Show.
21-21—Cleveland, O. National Petroleum Association, meeting.

MAY

2- 5—Washington, D. C. United States Chamber of Commerce, meeting.
17-18—Tulsa, Okla. American Petroleum Institute, mid-year meeting, Mayo Hotel.

JUNE

16-17—Louisville, Ky. American Automobile Association, convention.
18-July 3—Bordeaux, France. Seventh Automobile, Nautical and Aeronautical Show.

In This Corner . . . .

Opinions, suggestions, complaints, criticisms, grievances or what have you. Open to every one to say anything, anyhow, any time. The communications printed in this department represent the ideas and opinions of our readers. They are not necessarily ours. If you have something to say on any phase of automotive activity, wholesale, retail or abusive, let us hear from you and we will tell the world.

Dealers Exhibit Keen Interest In Service and Service Profits

Automotive Daily News: Since the publication of our letter on "Service and Service Profits" we have had an avalanche of letters from dealers all over the country representing almost every make of automobile. Many of these letters state very emphatically the dealer has taken to heart the counseling of the A. D. N. editorials and other service articles. Others have requested information as to how additional service may be brought into their shops saying that their eyes have been opened to service possibilities while on the other hand a score of letters from other dealers are controversial in character stating that they feel it impossible for a dealer to compete for service with alley garages and corner service stations.

You will be interested in knowing that these letters have come from every section of the country from Maine to California, and from Seattle to Tampa, indicating that the A. D. N. widespread dealer interest is growing by leaps and bounds.

An interesting letter comes from the maker of certain service equipment. He states that he never has much trouble in selling equipment to the oil and gas station operators because they are alert to the fact that they can get all the service work they can handle, because the dealers who sell the cars are indifferent to service on the cars they have sold, while, on the other hand, he says that his hardest job is getting the dealer (car dealer) to listen to any plan or get interested in any piece of service equipment which will tend to regain the service work which he has lost through his failure to realize the value of service.

We have replied to all the letters giving them the information they have asked for, but a question asked by one dealer is worth passing on to any dealers who may be interested.

This dealer admits that the A. D. N. suggestions have been logical and that he has adopted some which seemed to fit in his business, but his leading question is, "Why doesn't the factory show us how to do these things instead of writing us letters and telling us what to do?" He adds "Why doesn't the factory stop sending around a lot of inexperienced youngsters with a parrot like canned talk about service and why doesn't the factory send us men who can show us how to do things? The factory send men to visit us who do not know what it is all about, men who don't even understand the stuff the factory hands out and which we in turn can't understand?"

It seems to be that there are two answers to these questions. The first answer is in the old time question form, Why not take time and visit the nearest dealer who is giving real service and making money?" There is surely no secret in service. The dealer who is giving real service will always be proud of the fact that his work is being recognized and he will be only too glad to explain his work. Therefore we suggest that this dealer goes to Jonesville or Podunk or where ever it may be and learn from first-hand information how Jones overcomes the alley garage competition.

The answer from the factory angle is simple and easy. It is true that men are being sent out who have had no actual experience in service. The factory is doing the best it can because no sane factory employee who knows what service is and how it can be increased is going to stay on a factory job when he can earn twice or three times what the factory pays him by going into business for himself. Next the factory spends the majority of its efforts in doping out mechanical assistance for its dealers in the way of short-cut operations in repairs of adjustments to save money for the owners, but the main difficulty lies in the fact that the average dealer is unable to sell the big idea to the owner. The dealer instead of employing an intelligent man to manage the service department is of the opinion that any grease hound is good enough for the job of service manager. What this particular dealer needs is a service business manager, a man who can get business coming in and whats more important—after business comes in keep it from getting away again. The factory so far has not been able to employ men of that type. They would outrank salesmanagers in importance.

Another dealer contends that the paying of a big salary to a service manager is out of the question. To this dealer we stated that any man who can set about getting a plan which will bring business into the shop and who can keep it coming back it worth his weight in gold any time. Operating managers of any big business organizations are top salary men. We repeated our statement which appeared in our letter, which was to the effect that any dealer who up to the present time has from 3,000 to 4,000 cars of the makes he sells running around his zone of influence can well afford to hire a real business manager and pay him a salary for running the shop and seeing that business comes in. On a basis of 2,000 cars in a territory, a service manager is worth a salary of at least $5,000 a year, provided of course that the dealer has the same facilities for service that any up-to-date corner super-service station has. With such shop equipment as recommended by the factory and then the other service equipment which will enable the dealer to compete with any service organization, the dealer will not only be able to give better service but quicker service, and what's more, this same dealer can do work on the makes of cars he sells cheaper for the owner in the long run than any alley garage in the city.

What we seem to need right now is an awakening to the fact that 1933 profits will be reckoned by the volume of business of the shop—not the sales end. The number of cars in use and in need of service has been pointed out time and again, not only in the columns of the A. D. N. but every paper or magazine devoted to the industry and at the same time in almost the next column there are facts which show very conclusively that new car sales for 1933 are going to be below the average. Therefore the dealer who has built up a business should take steps to protect that business and not let the alley garage man or the corner service station wax fat, so to speak, on business which he or they did not help to create.

E. M. LUBECK,
Dealers Service Bureau,
Bloomfield Hills, Mich.

BILL HITS BUSES

Trenton, N. J., March 30.—Senator Barbour of Passaic has introduced a measure to eliminate deductions of bus registration fees from franchise taxes. Barbour said in his home city of Clifton an increase of $3,267 in franchise taxes would result; in Paterson $10,000 and in Passaic $6,000 if his measure were approved.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Production—Engineering—Factory

Edited by Herbert Chase

What Engineers and Executives Should Know About Patents

Business men and engineers connected with corporations are sometimes inclined to be contemptuous about patents and their value until, perhaps, their company is brought face to face with infringement litigation and severe penalties are imposed for failure to avoid infringements. Even the cautions of their own patent departments may not be heeded until a severe lesson teaches the wisdom of regarding the rights of inventors with sound patents which they may be infringed.

Knowing that this situation exists, and that there appears to be relatively little literature designed to inform engineers and executives on this subject, the following article is presented. The author, who remains anonymous, is not a patent lawyer, an engineer or an inventor. He is an executive who has had first-hand experience in patent litigation and evaluation. He has studied patent law as perhaps relatively few business men outside the legal profession have done, and has written on the subject in a non-technical way. In any event, those who have not first-hand knowledge of the subject treated will find it interesting and instructive.

Section 4886 of the revised statutes states: "Any person who has invented or discovered any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement thereof, not known or used by others in this country, or not printed or described in any printed publication in this or any foreign country, before his invention or discovery thereof, and not in public use or on sale more than two years prior to his application, unless the same has proved to have been abandoned, may, upon payment obtain a patent therefor."

Validity

It is the duty of the examiners in the Patent Office, during the application stage, to thoroughly examine the prior art relating to the invention and to reject all claims which are anticipated by the subject matter of prior patents or by devices or features which are public property. If the invention seems to have little likkelihood of becoming commercially important the investigation of the examiners is likely to be short and not particularly thorough. If, on the other hand, the invention seems to bear possibilities of becoming widely used the examiners are more thorough in their investigation of prior art and in their considerations as to whether or not the invention constitutes patentable invention. One rough gauge by which to judge the thoroughness with which the examiners have acted is the length of time in which the patent was in its application stage. Those patents which issue quickly after the application date are less likely to have been the subject of thorough examination on the two principal items which determine their validity, namely, patentability and prior art as affecting anticipations of the invention, than are those which have been the subject of several actions requiring a longer time.

In case the validity of a patent is questioned the issue is decided in the Federal courts, which universally hold that a patent is valid unless convincing proof is shown to the contrary, and if any particular item of controversy was settled by the examiners when the patent was in its application stage it is very seldom that the court will hold an opinion contrary to that of the Patent Office, especially with respect to any such previously settled issue.

While a patent may be declared invalid because of some minor technicality, such as a violation of one or more rules of practice of the Patent Office, improper oath, or other such minor matter, the principal test of validity lies in the answer to the questions:

1. Does the device constitute patentable invention?
2. Is it sufficiently novel over prior art?
3. Is it useful?

With the exception, perhaps, of Germany, no patent office of any nation is so thorough as the United States Patent Office in examination during the application stage of the various items affecting the ultimate question of validity.

What Constitutes Patentable Invention

The patent office is likely to give the patent applicant the benefit of any doubt as to whether or not any given device constitutes patentable invention. The courts are greatly influenced by the extent of commercial use to which it has been put, relying on the theory that if it has become commercially successful it is quite likely to have the elements of patentable invention. The application of some force of nature in a novel manner to any physical object, so that hitherto unknown results of useful nature are brought about, unquestionably indicates the use of the inventive faculties and the resulting machine would constitute patentable invention.

A good definition from a recent court decision is, "Invention consists in the conception of a function, and the means whereby the function can be operatively carried out." There is no question that patentable invention has resulted when an inventor has conceived a function destined to be of tremendous importance to a vast number of people and has used more skill and ingenuity than could have been expected of the average person skilled in that particular field and confronted with the same situation.

Novelty

Section 4886 of the revised statutes states as to novelty: "Not known or used by others in this country, or not printed or described in any printed publication in this or

(Continued on Page 7)

TRACTOR ENGINE DESIGN CHANGES

The depression is forcing radical changes in tractor engine design. The lessons learned by engineers in the manufacture of automobile and airplane engines, are being applied to the farm. The trend is toward a smaller, speedier and more economically operated tractor to replace the unwieldy, creeping and costly machine.

These are the conclusions reached by C. G. Krieger, engineer of the Detroit laboratories of the Ethyl Gasoline Corporation, in a survey of the latest developments in tractor enginering, made public by the corporation, owned jointly by General Motors Corporation and the Standard Oil Company of New Jersey.

Mr. Krieger revealed that improved tractors of the high compression type adapted to the use of anti-knock gasoline are to undergo official tests at the University of Nebraska at Lincoln, Neb., in preparation for the market of the spring of 1933.

"Older types of farm tractor engines possess defects which are being wiped out by a thorough revision of designs as a result of efforts to reduce farming costs," Mr. Krieger said, adding that adverse economic conditions have made important the inefficiency of engines of old design.

Modern high-compression practice, he declared, has resulted in the building of smaller engines, which generate an amount of power equal, and in some cases surpassing, the old type of engine.

"The increase of power possible by bringing tractor engines to conform to airplane engine efficiency," he pointed out, "is about 68 per cent., permitting 84 horsepower to be produced by an engine burning anti-knock gasoline, as compared with 50 horsepower produced by a kerosene-burning engine of the same effective size.

"If tractor efficiency is brought only to the point of the average automobile engine, the increase of power amounts to nearly 20 horsepower, or a total of 69½ from the same size engine which produces 50 on kerosene."

The changes in the design of the engine reduce the cost of plowing and other farm operations, the engineer declared, since the new models are leading to better, more powerful and flexible tractors, with a longer life, lower cost of operating and greater efficiency.

SEAT FILLINGS AS USED IN ENGLAND

SECOND INSTALLMENT

Sponge rubber seating composed of Sorbo material has been employed extensively. The value of this material from an hygenic point of view can be judged from the fact that it is employed in a number of institutions in the form of mattresses, while it is largely used for ambulances. In the case of seats the fillings are built up in the form of layers of sponge rubber as shown in Fig. 5, each layer being staggered so that suspension is obtained at every point of contact. Fig. 5 also illustrates a form of sponge rubber spring used in one type of Sorbo seat.

In a new seat for buses and coaches, the seat frames is made of drawn steel tubing with cushion and back seat built up on a plywood base. The cushion has a foundation of coil springs covered with a layer of hessian over which is placed a 1½-inch thick sponge rubber topping having a rounded edge to overlap the spring case. In the construction of the seat-back sponge rubber only is used, and a semi-bucket effect is produced by the inclusion of shaped ribs on the underside of the pad. The complete double seat, covered in leather or moquette, weights about 36 pounds.

Another form of seat filling material is composed of a special form of hair which is coated with rubber latex and, after being teased into special molds, is dried and vulcanized. It can thus be given any desired shape in inexpensive molds.

Fig. 3 shows an example of Hairlock molded material for a Talbot sedan. It consists of six units. The seat is formed of a spring frame on top of which is placed the pad. The edges of the spring frame are completely covered and the pad is located without the necessity of stitching. The back seat is used without springs, the natural resilience of the material being quite sufficient for the purpose.

The side rests are in one piece and fit over the wheel arches, incorporating the side arm rests. With this material the use of wood formers is avoided with a consequent saving in weight.

This material has been used with success by a number of body builders both on private and commercial coachwork, and an important point is that skilled labor is not necessary for its application. Hairlock can be placed over springs or air bags, and in the latter case a special mold is used to form a hollow on the underside of the pad.

Pertinent POKES and PARRIES

By HERBERT CHASE, Engineering Editor | By READERS

How Honest?

Consumers' Research, Inc., than which there are few greater sticklers for honesty in advertising and merchandising, recently asked us for a copy of our paper, "Pertinent Pokes for Satisfied Designers," delivered at the recent annual S. A. E. meeting. In acknowledging its receipt one member of its staff says:

"Your paper raises some interesting and important points relative to automobile design which the average buyer knows nothing about. The common run of automobile owners feel that every year, with the announcement of new models, the last word has been said in automobile design, little realizing how many superficial items and selling tricks are used to give them this impression."

We wonder whether Consumers' Research has researched far enough to prove this statement, or whether it is not itself overstating the facts. We admit that we have no proof either way, but it is our impression that the average automobile buyer discounts about ninety odd per cent. of the so-called selling tricks, such as over-stated claims about "new" or "revolutionary" developments which, perhaps, are new only to the particular car or model in question and are in reality not revolutionary but comparatively minor refinements. We presume it is to such claims as these that this critic has reference.

If it be true, however, that the automobile purchaser is rarely fooled by exaggerations, either in advertising or in sales talk, is it not likely to do harm rather than good to make such claims? In the last analysis, does it not come down, perhaps, to a question as to how honest advertising should be? Our personal view is that perfect honesty is rarely attained, but that the closer the advertisement can come to it the more potent and convincing it becomes to discriminating purchasers. We shall leave to others a discussion regarding the ethics and expediency of attempting to fool those who cannot discriminate. In these days of advertising by radio we recommend, however, a re-reading of the fable about the boy whose verbal advertisement, "Wolf! Wolf!" ultimately brought rather disheartening results. Even the dumb learn in time by experience.

To make the discussion more concrete, however, we venture to ask whether Consumers Research would like advertisements on the order of the following, and whether any body thinks they would sell automobiles. In asking this, of course, we make no pretense that the advertisement could not be greatly improved from many points of view:

WE BELIEVE
YOU'LL LIKE THE NEW A-CAR
Latest styling and many refinements are incorporated

A-Car's 1933 model works no revolution. Yet it marks a distinct advance over last year's successful product.

Bodies follow the prevailing vogue. Their contours are altered to reduce wind resistance. They are NOT "fully streamlined," as we question whether many people want a car of true streamline form as yet. An improved grade of attractive fabrics in late designs help to make interiors attractive.

Chassis, though not radically changed, incorporate many refinements. Engine power, for example, has been increased about 10 per cent. by a new design of cylinder head, but otherwise only detail changes have been effected in this unit. If you drive the new A-Car at the same speed as former models, a 5 to 10 per cent. decrease in fuel consumption may be expected. The car is speedier than its predecessor and somewhat smoother in operation, because of minor changes in mounting and accessory design.

Brakes are more effective than formerly, and easier to apply, thanks to power actuation. A few other items also make for easier control. Tires are slightly smaller in diameter, but have an increased section, so that lower inflation pressures can be used. This tends to improve riding qualities slightly.

Other changes are many but of less importance. Most of them are intended to overcome small deficiencies in last year's models. They help to make the new A-Car more nearly trouble-free. Every A-Car salesman is supposed to know what the changes are and why they were made.

Our aim has been to build a better car without increasing prices. We believe you will agree that we have succeeded. Anyway, we invite you to ride in the new A-Car and to ask other owners of A-Cars how they like them. Then you can draw your own conclusions.

The A-Car Company, Detroit.

CHRISTIE & THOMAS, INC., ATTRACTS 3,200 AT CLINIC

Worcester, Mass., March 30.—On Monday and Tuesday of this week Christie & Thomson, Inc., automobile spring specialists, and jobbers in replacement parts, held their fourth annual automotive clinic for the benefit of garage men and all others engaged in the automotive trade. On the first night, 1,500 were in attendance, and on the second night, 1,700. It was a great success.

Jack Kirk, regional vice-president of the Boosters, served as master of ceremonies. Regarding the employment situation, he emphasized that Washington cannot expect to do it all. All concerns must get to work and produce, thereby putting people to work.

Other speakers were Ira Lake of the Accurate Parts Company, who told about better service work, and George Brunner, president of the Motor Equipment Association, who spoke on better shop equipment for the doing of better work.

A prize was donated by Sam Samuels to the man who came the greatest distance, and J. F. Duby gave a prize to the oldest man in the industry who was in attendance.

Educational pictures were shown by the Champion Spark Plug Company and by the Longhead Brake Company. These were very helpful in showing dealers how to make better repairs.

C. J. Bova of the Ahlberg Bearing Company gave his own interpretation of a Scotch highland fling, which was one of the entertainment hits of the evening.

PATENT ACTIONS EXPEDITED

According to Commissioner of Patents Robertson, the number of patent applications disposed of during the last fiscal year was the highest in the history of the office. Applications that received final disposition amounted to 100,960, which was 7,553 over the previous record figure in 1931. This reduction in the number of applications awaiting official action has resulted in greatly reducing the time applicants must wait for action. Two years ago, in sixty-three examining divisions, only three were under six months in acting on applications, but at present all divisions are under six months.

OPENS EASTERN OFFICE

Jersey City, N. J., March 30.—Metallizing Company of America has opened an Eastern sales and distributing office at 214 Provost St. here, in charge of R. A. Axline.

PACKARD ANNOUNCES NEW FORMAL SEDAN

(Continued from Page 1)

posts and fits snugly against the upholstering cloth of the ceiling.

When a sedan, or owner driven car, is wanted, the glass partition lowers out of sight. Practically nothing is left to indicate that the car is any different than a normal sedan.

Opera type occasional seats, one side-facing and the other facing the rear, are provided in the passenger compartment. The roof and rear quarters of the car are leather covered. The new body is mounted on the Packard Eight, Super Eight and Twelve chassis.

PERSONNEL CHANGES BY STANDARD OIL

Newark, N. J., March 30.—Continuing the consolidation of its domestic marketing activities, the Standard Oil Company of New Jersey, the operating company incorporated in Delaware, has made C. G. Sheffield, vice-president, manager of retail sales, effective on Saturday. John E. Skehan, a vice-president of the Standard Oil Company of Louisiana, has been made manager of wholesale sales, and E. A. Holbein, a director of the Delaware company, has been appointed manager of tank-car sales.

It was announced that these three officials would direct sales operations in their respective divisions in the territories served by Standard Oil of New Jersey, Standard Oil of Pennsylvania, Standard Oil of Louisiana and the Colonial Beacon Oil Company, Inc.

Cumulative New Commercial Car Registration Statistics, February, 1933

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Metropolitan district figures compiled by Sherlock & Arnold, New York city, are included in New York state total. Readers desiring county, city, or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies. Some of this data has been published previously, but it is given here complete for the convenience of our subscribers.

Returns for today: Alabama, Arizona, Connecticut, Georgia, Maine, Massachusetts, Montana, Nebraska, Nevada, New York, Rhode Island, Texas and Washington

In this table, 37 states and the District of Columbia

States	Austin	Autocar	Brockway	Chevrolet	Diamond-T	Dodge	Federal	Ford	G. M. C.	Indiana	International	La France Republic	Mack	Pierce-Arrow	Reo	Rockne	Sterling	Stewart	Studebaker	White	Willys	Miscellaneous	Totals	States
Alabama	1			84		1		18	3		18				2				1				127	Alabama
Arizona				17				10	4		2								1				34	Arizona
Connecticut		1	1	53	1	7	1	16	3	1	22		1		6	3			2			2	120	Connecticut
Delaware				28				7			3											1	39	Delaware
Florida	27			149	2	7		132		2	41		2		3					1			366	Florida
Georgia				9		1	1	5	1	1	4				1								23	Georgia
Idaho				7		2		6			4												19	Idaho
Illinois		3		154	38	12	6	112	9		78		10		14		4		5	20	1	25	491	Illinois
Indiana	3			134	3	15	2	58	7	7	37				3			1	4			1	275	Indiana
Kansas				93	3	3		37			10		1		1				2			1	151	Kansas
Maine				49	2			20	3		7				1	1							83	Maine
Maryland		2	2	106	2	3	2	33	4		20		1	1	2			1	2	6	1	2	190	Maryland
Massachusetts	1	3	3	173	6	12	3	37	11	1	24			1	12	1		2	7	2		5	304	Massachusetts
Michigan				151		22	5	63	10		18	1			9	2			2	10	2	4	299	Michigan
Minnesota				118	5	2	4	28	2		28				6				3		1	6	203	Minnesota
Missouri		2		299	18	25	9	99	8	6	60	1			7				8	9	2	2	555	Missouri
Montana				4				3			1									1			9	Montana
Nebraska				31	2			12	1	1	8				1							2	58	Nebraska
Nevada				6		1		5	2										2				16	Nevada
New Hampshire				27		1		11			7				1			1	1				49	N. Hampshire
New Jersey	1	3	1	152	8	30	2	72	15	4	52			1	6			1	3	4		8	363	New Jersey
New Mexico				18				10			9												37	New Mexico
New York	2	6	28	455	37	43	7	213	89	10	175		30		23	2	1	17	22	26	1	9	1196	New York
North Carolina	1			138	3	3		58	3	1	17				1							5	230	North Carolina
North Dakota				4				5			3				1								13	North Dakota
Ohio	1	2		197	6	15		115	9	5	40		1		10	4			5	3	2	4	419	Ohio
Oregon				25		2	1	19			8												55	Oregon
Pennsylvania	1	11	7	335	9	43	2	230	16	4	101		7		12	4		6	13	7	4	6	818	Pennsylvania
Rhode Island				17				6	2	3	3		1	1	5	1							39	Rhode Island
South Carolina	2			39		1		28	1		5												76	South Carolina
S. Dakota				15	1			14			5								1				36	South Dakota
Texas	2			266	1	7	2	84	11	2	53		2		3			1		3			141	Texas
Utah				19		2		6			5												32	Utah
Virginia	2			143	4	10	2	60	5		21									3		2	252	Virginia
Washington		2		42	1		2	23	2		4				1				2			2	81	Washington
W. Virginia				53		7		19	4	1	11				4			1				2	102	W. Virginia
Wisconsin				73	6	6		45	4		22						2	1	4		1	2	166	Wisconsin
Dist. of Col.	6	1		24	1	1	1	13	4		4		3			1							59	Dist. of Col.
Totals	50	36	42	3707	159	284	52	1732	233	49	930	2	59	4	135	19	7	32	89	95	15	95	7826	Totals
Alabama, 1932			1	72		3	1	33	9		14		1		2				1				137	Alabama, 1932
Arizona, 1932				19		1		19			4				1							5	49	Arizona, 1932
Connecticut, '32		2	1	97	1	10	4	57	7		20	1	11	3	5						1	10	230	Conn., 1932
Delaware, 1932				22				32	3		6									1		4	68	Delaware, '32
Florida, 1932				157		14	1	194	9		23				9					3	1	4	415	Florida, 1932
Georgia, 1932			1	79	1		1	70	3		9				1				1	1		3	170	Georgia, 1932
Idaho, 1932				16		5		11			6				1					1	1	4	45	Idaho, 1932
Illinois, 1932		3	4	274	41	45	18	154	50		92	1	5		7		2	1	10	4	8	39	758	Illinois, 1932
Indiana, 1932		1	13	169	2	15	3	136	15		50	4		2	3			2	8		5	5	438	Indiana, 1932
Kansas, 1932				178	1	15		68	4		34	1	1		3				2		2	10	319	Kansas, 1932
Maine, 1932				63		9	3	49	1		9			1	7				3		1		146	Maine, 1932
Maryland, '32		3	5	105	1	10	1	62	7		21			1	5				2	5	1	1	230	Maryland, '32
Mass., 1932		6	3	137	1	24	2	173	29		24		7	1	10		1	5	6	3	2	5	439	Mass., 1932
Michigan, '32				169		14	7	171	18		26	2			10			1	14		4	15	451	Michigan, '32
Minnesota, '32				163	10	25	2	120	9		34	1	5		9			1	8	7	2	2	398	Minnesota, '32
Missouri, 1932		1	1	463	20	36	12	321	46		100	2	5		36		1	1	10	1	9	26	1091	Missouri, 1932
Montana, 1932				18		3		26			4				1						2		54	Montana, 1932
Nebraska, 1932				94	1	6	1	66	4		50				6				5		3	4	240	Nebraska, 1932
Nevada, 1932				8		2		8	1		1				1					1			22	Nevada, 1932
N. Hamp., '32				26	5	1		20	1		1				1			1	1	1	1		59	N. Hamp., '32
New Jersey, '32		1	2	167	24	27	4	138	25		39	2	7	3	19		1	4	6	9	4	12	495	New Jersey, '32
N. Mexico, 1932				21		1		11	1		1								1	1			37	New Mexico, '32
New York, '32		30	25	415	28	63	5	466	45		130	1	38	2	37		6	33	9	78	6	115	1532	New York, 1932
N. Carolina, '32				108	1	4		67	7		10				2					1		5	205	N. Carolina, '32
N. Dakota, '32				10				13			6								1				30	N. Dakota, '32
Ohio, 1932		4	5	221	5	22	2	264	26		50		2		10		1	9	18	5	6	28	678	Ohio, 1932
Oregon, 1932				29		5	2	31	6		12			1	1				4		1	4	96	Oregon, 1932
Penn., 1932		8	6	382	5	66	5	350	31		122	1	15	2	21		5	25	15	11	29	18	1117	Penn., 1932
Rhode Is., '32				31		9	1	30	8		3		1		1						2		86	Rhode Is., 1932
S. Carolina, '32				47		2	1	40	6										2			2	100	S. Carolina, '32
S. Dakota, '32				29		4		15	1		15								2		1		67	S. Dakota, '32
Texas, 1932			4	374	1	19	2	258	13		81		1		8				8	4	1	14	788	Texas, 1932
Utah, 1932				20		2		26	5		4				2						1		60	Utah, 1932
Virginia, 1932		1		217		15		119	14		18				6				2	2		2	396	Virginia, 1932
Washington, '32				53		7		59	9		13	1			3				7			3	155	Washington, '32
W. Virginia, '32			1	50		10		41	6		8				3					1	4	1	125	W. Virginia, '32
Wisconsin, '32				122	5	5	2	87	13		17	1	1		5		1		6	1	2	14	282	Wisconsin, '32
Dist. of Col., '32		1		35	2	4	3	46	2		5		3	1			1					3	106	D. of Col., '32
Totals, 1932	**	61	72	4660	155	503	83	3851	434	*	1062	18	103	17	241		19	83	152	141	100	539	12114	Totals, 1932

**Carried in the miscellaneous column. *Combined with Brockway.

What Engineers and Executives Should Know About Patents

(Continued from Page 5)

any foreign country, before his invention or discovery thereof, and not in public use or on sale more than two years prior to his application, unless the same has proved to have been abandoned."

It is not necessary that the invention cover a new product. The application of forces in a novel manner to accomplish new and useful results is the subject matter to be considered and this result can apply to old as well as to new products. Possible anticipations of any invention should be considered with this fact always in mind.

Publication anywhere or public use or sale in this country two years or more before the filing date of the inventor's patent application constitutes publication is not hard to define for under this comes any description of the invention which is in print. If not printed it does not mean publication. The question of what constitutes public sale is also comparatively simple to determine. Private sales can usually be readily distinguished from public sales. The question of what constitutes public use is sometimes not so easy to distinguish. In this connection it should be noted that experimental use is not a bar and the courts are very liberal to the inventor in construing a use to be experimental. It is allowable to sell publicly an experimental machine without barring one's patent.

An invention is not new if some other person than the inventor has previously conceived the device and has not abandoned his efforts to patent it. In such case, priority of invention is the issue involved, and the Patent Office procedure is called an interference case. In these the first person to apply for the patent has a great advantage, even though his date of conception is later than the alleged date of the other inventor. Although an interference may be declared, even after a patent has issued, unless it is declared by the Patent Office during the application stage, it is quite unlikely that it will be declared later. In the case of patents which were issued more than two years after the application date, there is slight chance of proving priority of invention by other inventors. This applies even more to patents which have been issued for any considerable time. Any one claiming priority of invention must prove not only an earlier date of conception, but he must prove either actual use of the machine, or a sale or a full published description prior to the conception date of the second inventor.

Until recently "anticipation has been considered as a separate issue from "priority," the distinction between them being that anticipation applied to the issue date of the two patents in question, and priority to the conception dates of the two inventors. A recent decision of the United States Supreme Court has abolished this distinction. It establishes the principle that it is the filing date, and not the issue date, which counts. It is impossible, therefore, for a patent which issued prior to another patent to anticipate the patent of later issue unless the one of earlier issue antedates the other in the filing date.

It is thus evident that if one is to succeed in attacking a patent on the ground that the invention is not new, he must prove that the one to whom the patent was issued was not the original and first inventor, and, moreover, must prove that no material or substantial part of the thing invented was discovered by the person to whom the patent was issued.

Usefulness

Mere ideas are not patentable. The invention must be both operable and useful if the patent is to issue. The Patent Office, however, is very liberal in its interpretation of these two requisites. It will consider any invention which is not harmful or frivolous as useful if it is operable, and it will consider anything operable which, if built as shown in the patent, will work. The question of usefulness, therefore, from the standpoint of validity of the patent, is not of great importance. The degree of usefulness of an invention, however, is of great importance as affecting litigation after the patent issues.

If the validity of a patent is attacked on the ground of lack of novelty or lack of patentable invention, the degree to which the device in question has been used commercially and the extent to which it has been pirated by others will have great weight with the court in deciding these issues. Of course, great usefulness cannot replace either lack of invention or lack of novelty. But in cases which are close and rather difficult to decide, the very fact that an invention is being widely used will be considered to indicate that it contains both novelty and the elements of true invention—assuming, of course, that the use of the invention became wide after and not before the patent issued.

The degree of usefulness of an invention plays an important part in determining the scope of a patent. If an invention is a pioneer in a new and practically unworked field and its use subsequently becomes general, it will be assumed that important benefits have accrued to the are involved because of the invention, and the courts and the Patent Office will construe almost anything similar to be an equivalent. It will thus be seen that the degree of usefulness of an invention has an important influence with the courts in determining the two vital elements of a patent which constitute its value, namely, validity and scope.

Reading a Patent

The best place to start in the reading of a patent is not with the claims or with the drawings, but with the statement of purposes at the beginning of the specifications. In other words, a patent should be read as any other document, from the beginning to the end—not from the end to the beginning. An interpretation of the claims should never be attempted until the reader has thoroughly digested the specifications and drawings. It is from these that an understanding can be obtained of one embodiment of the invention, and, until the reader thoroughly understands at least one form of the invention, he is not in position to go into the ramifications involved in determining the scope of the claims. The mistake should not be made of assuming that the drawings and their description represent the invention in its entirety. These represent only one form of the invention, which, if of broad scope, may take numerous other forms which may be so different as to be hardly recognizable from the patent drawings. Also, the reader should not make the mistake of assuming that the statements of the inventor made while giving the purpose and description of his invention limit the patent to the exact wording he has used. It is only in case of ambiguity or lack of definiteness of the claims that one is allowed to interpret the claims in terms of the specification or drawings. It is the invention to which the inventor is entitled to a seventeen-year monopoly, and the particular machine or device which he has described in his patent is only one form of the invention.

It is of the utmost importance, therefore, that the patent be read in its entirety until it is clearly understood as to just what constitutes the invention. In arriving at this understanding the broad definition of what is meant by the term "patentable invention" should be borne in mind. In short, the reader should, if he understands the invention, be able to answer the question, "How did the inventor in this case use the forces of nature in a manner in which they had not been used previously to accomplish a result which was useful and which had never before been accomplished?" It is only after the reader is able to answer this question accurately that he is competent to interpret the claims.

In reading the claims it should be remembered that each claim is, in effect, a patent in itself. The separate claims, of course, all read on the invention, but in them the scope of the invention is stated and each claim must be considered in itself and not in relation to other claims or to the specification unless there be lack of clearness and the necessity of further explanation in order to obtain proper understanding. It is usually the purpose of the inventor to cover in his claims every possible combination of the new ideas covered by his invention.

Because the claims define the scope of the patent, it is particularly important that certain facts regarding them be borne in mind as they are read. If they are properly drawn they will be detailed statements of every possible combination of the new ideas involved in the invention. Each claim stands alone as a complete description of the invention as applied to an operative mechanism or device. If a claim is too broad it will embrace anticipatory matter and hence be invalid, but one such claim will not affect other claims, and the breadth of a claim has no bad effect unless, because of it, it can be attacked on the ground of one or more of the factors affecting validity.

In reading claims it is well to have a dictionary at hand and the dictionary should be not only standard and complete but it should have been published at a time when the

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Six Truck Sales Leaders for Feb.-Jan., 1933

Returns for today: Alabama, Arizona, Connecticut, Georgia, Maine, Massachusetts, Montana, Nebraska, Nevada, New York, Rhode Island, Texas and Washington.

In this table: 37 states and the District of Columbia.

FEBRUARY, 1933 State	Sales	FIRST		SECOND		THIRD		FOURTH		FIFTH		SIXTH	
Alabama	127	Chev	84	F-In	18	GMC	3	Reo	2	Au-D	1		
Arizona	34	Chev	17	Ford	10	GMC	4	Int	2	Stude	1		
Connecticut	120	Chev	53	Int	22	Ford	16	Dodge	7	Reo	6	G-Ro	3
Delaware	39	Chev	28	Ford	7	Int	3						
Florida	366	Chev	149	Ford	132	Int	41	Austin	27	Dodge	7	Reo	3
Georgia	23	Chev	9	Ford	5	Int	4	*	1				
Idaho	19	Chev	7	Ford	6	Int	4	Dodge	2				
Illinois	491	Chev	154	Ford	112	Int	78	DT	38	White	20	Reo	14
Indiana	275	Chev	134	Ford	58	Int	37	Dodge	15	G-I	7	Stude	4
Kansas	151	Chev	93	Ford	37	Int	10	DT-D	3	Stude	2	M-R	1
Maine	83	Chev	49	Ford	20	Int	7	GMC	3	DT	2	R-Ro	1
Maryland	190	Chev	106	Ford	33	Int	20	White	6	GMC	4	Dodge	3
Massachusetts	304	Chev	173	Ford	37	Int	24	D-R	12	GMC	11	Stude	7
Michigan	299	Chev	151	Ford	63	Dodge	22	Int	18	G-Wi	10	Reo	9
Minnesota	203	Chev	118	F-In	28	Reo	6	DT	5	Federal	4	Stude	3
Missouri	555	Chev	299	Ford	99	Int	60	Dodge	25	DT	18	Fe-W	9
Montana	9	Chev	4	Ford	3	In-W	1						
Nebraska	58	Chev	31	Ford	12	Int	8	DT	2	G-I-R	1		
Nevada	16	Chev	6	Ford	5	G-S	2	Dodge	1				
New Hampshire	49	Chev	27	Ford	11	Int	7	*	1				
New Jersey	363	Chev	152	Ford	72	Int	52	Dodge	30	GMC	15	DT	8
New Mexico	37	Chev	18	Ford	10	Int	9	Dodge	15	Reo	10	GMC	9
New York	1196	Chev	455	Ford	213	Int	175	GMC	89	Dodge	43	DT	37
North Carolina	230	Chev	138	Ford	58	Int	17	DT-D-G	3	Au-I-R	1		
North Dakota	13	Ford	5	Chev	4	Int	3	Reo	1				
Ohio	419	Chev	197	Ford	115	Int	40	Dodge	15	Reo	10	GMC	9
Oregon	55	Chev	25	Ford	19	Int	8	Dodge	2	Federal	1		
Pennsylvania	818	Chev	335	Ford	230	Int	101	Dodge	43	GMC	16	Stude	13
Rhode Island	39	Chev	17	Ford	6	Reo	5	I-In	3	GMC	2	M-P-Ro	1
South Carolina	76	Chev	39	Ford	28	Int	5	Austin	2	D-G	1		
South Dakota	36	Chev	15	Ford	14	Int	5	DT-S	1				
Texas	441	Chev	266	Ford	84	Int	53	GMC	11	Dodge	7	R-W	3
Utah	32	Chev	19	Ford	6	Int	5	Dodge	2				
Virginia	252	Chev	143	Ford	60	Int	21	Dodge	10	GMC	5	DT	4
Washington	81	Chev	42	Ford	23	Int	4	A-D-G-S	2	DT-R	1		
West Virginia	102	Chev	53	Ford	19	Int	11	Dodge	7	G-R	4	I-St	1
Wisconsin	166	Chev	73	Ford	45	Int	22	DT-D	6	G-S	4	Sterling	2
Dist. of Columbia	59	Chev	24	Ford	13	Austin	6	G-In	4	Mack	3	*	1

JANUARY, 1933 State	Sales	FIRST		SECOND		THIRD		FOURTH		FIFTH		SIXTH	
Alabama	159	Chev	99	Ford	39	Int	12	GMC	3	Indiana	2	*	1
Arizona	37	Chev	17	Ford	14	D-In	3						
Connecticut	124	Chev	66	Ford	25	Int	9	D-R	5	GMC	4	Stude	3
Delaware	49	Chev	29	Ford	15	I-IN	2	Reo	1				
Florida	318	Ford	149	Chev	96	Int	28	Austin	26	Indiana	5	Reo	4
Georgia	121	Chev	66	Ford	39	Int	9	GMC	4	*	1		
Idaho	39	Chev	20	Ford	15	Int	3	GMC	1				
Illinois	852	Chev	242	Ford	199	Int	105	DT	70	GMC	54	Dodge	36
Indiana	405	Chev	147	Ford	141	Int	58	Stude	14	Dodge	12	GMC	9
Kansas	85	C-F	37	Int	4	M-S	2	D-G	1				
Maine	120	Chev	62	Ford	40	Int	8	D-R	3	White	2	DT-G	1
Maryland	166	Chev	69	Ford	40	Int	13	GMC	7	Dodge	5	Autocar	4
Massachusetts	433	Ford	141	Chev	139	GMC	26	Int	24	White	18	Reo	15
Michigan	401	Chev	176	Ford	135	Int	34	Federal	16	D-S	8	G-R	7
Minnesota	291	Chev	147	Ford	93	Int	20	Dodge	11	DT	8	Stude	4
Missouri	206	Chev	92	Ford	76	Int	19	Dodge	5	GMC	4	Indiana	3
Montana	9	Ford	3	C-G-In	2								
Nebraska	88	Chev	42	Ford	28	Int	7	DT-D	3	G-S	2		
Nevada	26	Chev	10	Ford	9	D-In	2	G-M-R	1				
New Hampshire	37	Chev	17	Ford	10	DT-In	3	*	1				
New Jersey	358	Chev	137	Ford	101	Int	29	Dodge	17	Mack	13	DT	11
New Mexico	73	Chev	38	Ford	28	Int	5	D-S	1				
New York	974	Ford	305	Chev	269	Int	78	White	68	GMC	47	Dodge	41
North Carolina	402	Chev	194	Ford	138	Dodge	18	Int	17	GMC	9	Au-DT	6
North Dakota	30	Chev	16	Ford	8	Int	4	D-G	1				
Ohio	507	Chev	190	Ford	186	Int	56	Dodge	14	DT	12	G-R-W	6
Oregon	40	Chev	18	Ford	17	G-I	2	Reo	1				
Pennsylvania	842	Chev	344	Ford	259	Int	80	Dodge	37	White	20	GMC	19
Rhode Island	61	Ford	27	Chev	14	Int	5	Reo	4	D-Fe-G	3	P-S	1
South Carolina	113	Chev	69	Ford	26	Int	6	Austin	4	GMC	3	Dodge	2
South Dakota	38	Chev	15	Ford	14	Int	5	*	1				
Texas	923	Chev	512	Ford	280	Int	67	GMC	19	Dodge	17	DT	6
Utah	60	Chev	35	Ford	14	Int	5	GMC	3	Dodge	2	Reo	1
Virginia	256	Chev	137	Ford	84	Int	9	D-G	8	White	4	Reo	3
Washington	176	Ford	71	Chev	54	Int	15	Dodge	6	G-R-S	4	Indiana	3
West Virginia	153	Chev	75	Ford	56	Int	13	GMC	3	D-I	2	Stude	1
Wisconsin	236	Ford	91	Chev	73	Int	18	DT	15	Dodge	10	GMC	8
Dist. of Columbia	82	Ford	38	Chev	22	Int	8	White	7	D-G	2	*	1

KEY TO ABBREVIATIONS AND SYMBOLS

A—Autocar; Au—Austin; B—Brockway; C—Chevrolet; D—Dodge; DT—Diamond T; F—Ford; Fe—Federal; G—GMC; I—Indiana; In—International; LFR—La France-Republic; M—Mack; P—Pierce-Arrow; R—Reo; Ro—Rockne; S—Studebaker; St—Stewart; W—White; Wi—Willys.

What Engineers and Executives Should Know About Patents

(Continued from Page 7)

attorneys were prosecuting the application, or before. It is a common error to judge the entire wording of a patent in terms of the nomenclature in effect at the date of the reading of the patent whereas it will often be found that certain words are in the patent the meaning of which has changed due to progress in the art involved since the wording of the application. It must also be borne in mind that the invention and the wording of the patent applied to the state of the art at the time the invention was made and not necessarily to the state of the art at the time the patent is being read. Attention to this fact will often explain what ous or indefinite statements.
ous or indifinite statements.

(To Be Continued)

Passenger Car Output Jan. and Feb. Beats '32

(Continued from Page 1)

ger cars produced in the United States and Canada, against 200,397 in the same period of 1932.

Truck production in the first two months this year was 37,749, against 45,451 in the same period a year ago.

Passenger car production in February fell off slightly, the total being 91,340, against 94,085 in the same month last year. This loss was not enough to nullify the gain registered in January when passenger car output this year was 108,392, against 98,706 in January, 1932.

BATTERY GROUP PASSES RESOLUTION

(Continued from Page 1)

B. F. Raycroft of the Electric Storage Battery Company, chairman.

The industry committee reviewed the trade practice rules adopted at the November conference and added several new rules to be submitted to a second conference of the industry to be called by the chairman for May 1 at Louisville, Ky. Sub-committees were also appointed for a study and report on the possible revision of the rules on guarantees and consignments, the reports to be submitted to the conference in Louisville.

The following resolutions were adopted unanimously by the industry committee and the chairman was instructed to send copies to all interested parties:

Resolved, That in order to protest the public against misrepresentation and deception, the attention of the Federal Trade Commission, the United States Bureau of Standards, the National Better Business Bureau and all other public authorities and fair trade enforcement bodies should be, and hereby is, directed to the renewed activities of manufacturers and/or distributors of substitute or special electrolytes or electrolyte compounds, for use in storage batteries where such electrolytes or compounds are misrepresented by claims that they are better than the standard battery electrolyte (dilute sulphuric acid, H_2SO_4) invariably used by all recognized battery manufacturers.

Resolved, That any analysis and/or tests of such electrolytes or compounds for publicity purposes should only be conducted under impartial auspices by competent chemists of recognized battery experience.

FEBRUARY EMPLOYMENT AND PAY ROLLS UP

(Continued from Page 1)

seasonal employment increase between these two months of 1.4 per cent. in the last ten years and a corresponding pay roll increase of 4.9 per cent. These figures are those just issued by the United States Bureau of Labor Statistics.

Taking 1926 employment as the hypothetical 100, it is computed that employment in the automotive industry during February was on a 50.3 basis as compared to 51.6 in January and 67.2 in February, 1932.

Using the same basis of comparison, February pay rolls in February were on a 31.3 scale compared to 35.3 in January and 50.6 in February, 1932.

REO ADDS 22 DEALERS AND 4 DISTRIBUTORS

(Continued from Page 1)

C. C. McKinley, Frank B. Gregg and H. H. Rosenthal are the secretary, president and general sales manager of the McKinley-Gregg Automobile Company of Pittsburgh, Penn., whose territory includes part of Ohio as well as the southwestern corner of Pennsylvania.

The franchise for Denver, Col., and all of the state of Colorado except one county, has been awarded to Colorado Reo, Inc., of which Robert H. Waterman is president, Orville Robinson, vice-president in charge of service, and Harry Graham, secretary-treasurer and general sales manager. Mr. Graham has been with Reo for fifteen years and members of the service department have Reo records dating back from ten to eighteen years.

At Youngstown, O., the Franklin Youngstown Company is to distribute Reo passenger cars and speedwagons in a territory including that city and portions of eastern Ohio and western Pennsylvania.

In addition to these distributors, Reo announces the appointment of twenty-two new dealers in as many cities in different parts of the country, as follows:

Oaks Garage, Chico, Cal.; Coast Line Stages, Fort Bragg, Cal.; B. E. Munson, Modesto, Cal.; Cook & Aletto, Orland, Cal.; Fred Neufeldt, Petaluma, Cal.; George E. Bunker, Pomona, Cal.; George Crowney, Red Bluff, Cal.; Charles P. Oakley Motor Company, Santa Cruz, Cal.; The Johnny Walker Company, Ventura, Cal.; Jeffers & McBroom, Kankakee, Ill.; Mock Brothers, Ashland, Ky.; Fenway Reo Sales and Service, Boston, Mass.; H. A. Grimes Motor Sales, Melrose, Mass.; George E. Haller, Ludington, Mich.; Reo Silliman Company, Montclair, N. J.; William Stigert, Flushing, N. Y.; Gonzales Motor Sales, Monticella, N. Y.; Utica Motor Car Company, Utica, N. Y.; Earl W. Weldon, Dover, O.; Blaettnar Auto Sales Company, Pomeroy, O.; McNeer-Nash Company, Portsmouth, O.

STUDEBAKER INCREASES PAYROLL TO OVER 2,000

(Continued from Page 1)

all sections of the country. On Thursday, March 29, the company received 175 orders for cars, H. S. Vance, vice-president, and one of the three receivers appointed to conduct the affairs of the company, announced today.

It is expected that Studebaker will continue increasing its working force, gradually putting on workers in all departments until normal employment of around 7,000 has been re-established.

ELECTRIC OUTPUT

New York, March 30.—Electric output in the week ended March 25 was 1,409,655,000 kilowatt hours, according to the Edison Electric Institute, or 6.9 per cent. less than in the corresponding week for 1932. This compares with production of 1,375,207,000 kilowatt hours last week, which was 10.6 per cent. under the 1932 period.

Six Truck Sales Leaders for January, 1933

In this table, 44 states and the District of Columbia

JANUARY, 1933 State	Sales	FIRST		SECOND		THIRD		FOURTH		FIFTH		SIXTH	
Alabama	159	Chev	99	Ford	39	Int	12	GMC	3	Indiana	2	*	1
Arizona	37	Chev	17	Ford	14	D-In	3						
California	728	Ford	274	Chev	214	White	38	Dodge	35	Int	28	GMC	25
Colorado	178	Chev	84	Ford	47	GMC	16	Int	14	Dodge	6	Stude	5
Connecticut	124	Chev	66	Ford	25	Int	9	D-R	5	GMC	4	Stude	3
Delaware	49	Chev	29	Ford	15	I-In	2	Reo	1				
Florida	518	Ford	149	Chev	96	Int	23	Austin	26	Indiana	5	Reo	4
Georgia	121	Chev	66	Ford	39	Int	9	GMC	4	*	1		
Idaho	39	Chev	20	Ford	15	Int	3	GMC	1				
Illinois	852	Chev	242	Ford	199	Int	105	DT	70	GMC	54	Dodge	36
Indiana	405	Chev	147	Ford	141	Int	58	Stude	14	Dodge	12	GMC	9
Kansas	85	C-F	37	Int	4	M-S	2	D-G	1				
Kentucky	289	Chev	134	Ford	81	Int	43	G-S	7	Au-DT	4	D-R	2
Louisiana	175	Chev	86	Ford	52	Int	22	GMC	6	Dodge	5	Austin	2
Maine	120	Chev	62	Ford	40	Int	8	D-R	3	White	2	DT-G	1
Maryland	166	Chev	69	Ford	40	Int	13	GMC	7	Dodge	5	Autocar	4
Michigan	401	Chev	176	Ford	135	Int	34	Federal	16	D-S	8	G-R	7
Minnesota	291	Chev	147	Ford	93	Int	20	Dodge	11	DT	8	Stude	4
Mississippi	99	Chev	58	Ford	34	Int	4	Austin	2	Stude	1		
Missouri	206	Chev	92	Ford	76	Int	19	Dodge	5	GMC	4	Indiana	3
Montana	9	Ford	3	C-G-In	2								
Nebraska	88	Chev	42	Ford	28	Int	7	DT-D	3	G-S	2		
Nevada	26	Chev	10	Ford	9	D-In	2	G-M-R	1				
New Hampshire	37	Chev	17	Ford	10	DT-In	3	*	1				
New Jersey	358	Chev	137	Ford	101	Int	29	Dodge	17	Mack	13	DT	11
New Mexico	73	Chev	38	Ford	28	Int	5	D-S	1				
New York	974	Ford	303	Chev	269	Int	78	White	68	GMC	47	Dodge	41
North Carolina	402	Chev	194	Ford	138	Dodge	18	Int	17	GMC	9	Au-DT	6
North Dakota	30	Chev	16	Ford	8	Int	4	D-G	1				
Ohio	507	Chev	190	Ford	186	Int	56	Dodge	14	DT	12	G-R-W	6
Oklahoma	234	Chev	134	Ford	56	Int	22	Dodge	8	GMC	6	Indiana	3
Oregon	40	Chev	18	Ford	17	G-I	2	Reo	1				
Pennsylvania	842	Chev	344	Ford	259	Int	80	Dodge	37	White	20	GMC	19
Rhode Island	61	Ford	27	Chev	14	Int	5	Reo	4	D-Fe-G	3	P-S	1
South Carolina	113	Chev	69	Ford	26	Int	6	Austin	4	GMC	3	Dodge	2
South Dakota	38	Chev	15	Ford	14	Int	5	*	1				
Tennessee	193	Chev	101	Ford	54	Int	14	Dodge	4	Fe-S-W	3	G-I	2
Texas	923	Chev	512	Ford	280	Int	67	GMC	19	Dodge	17	DT	6
Utah	60	Chev	35	Ford	14	Int	5	GMC	3	Dodge	2	Reo	1
Virginia	256	Chev	137	Ford	84	Int	9	D-G	8	White	4	*Reo	3
Washington	176	Ford	71	Chev	54	Int	15	Dodge	6	G-R-S	4	Indiana	3
West Virginia	153	Chev	75	Ford	56	Int	13	GMC	3	D-I	2	Stude	1
Wisconsin	236	Ford	91	Chev	73	Int	18	DT	15	Dodge	10	GMC	8
Wyoming	44	Chev	21	Ford	11	D-In	5	G-S	1				
Dist. of Columbia	82	Ford	38	Chev	22	Int	8	White	7	D-G	2	*	1

DECEMBER, 1932 State	Sales	FIRST		SECOND		THIRD		FOURTH		FIFTH		SIXTH	
Alabama	106	Chev	48	Ford	35	Int	8	Dodge	3	R-I	2	*	1
Arizona	37	Ford	28	Chev	7	GMC	2						
California	455	Ford	236	Chev	86	Dodge	25	Stude	20	Int	18	GMC	12
Colorado	51	C-F	18	Int	5	Dodge	3	S-WO	2	G-R-W	1		
Connecticut	168	Ford	50	Chev	47	GMC	14	Int	13	Dodge	12	Reo	8
Delaware	35	Ford	15	Chev	10	GMC	7	In-M-St	1				
Florida	313	Ford	170	Chev	71	Int	23	DT-FE-R	5	Dodge	4	GMC	3
Georgia	82	Ford	34	Chev	31	Int	9	D-G	2	DT-I-WO	1		
Idaho	16	Ford	10	Int	3	Chev	2	Reo	1				
Illinois	480	Chev	215	Ford	214	Int	16	DT	15	Dodge	11	Fe-I	2
Indiana	156	Ford	68	Chev	36	Int	22	GMC	9	Indiana	5	Stude	4
Kansas	62	Ford	18	Chev	16	Int	10	GMC	5	WO	4	DT-D-M	2
Kentucky	222	Ford	87	Chev	65	Int	22	GMC	14	Dodge	10	DT	9
Louisiana	81	Ford	48	Chev	17	GMC	7	Int	5	DT	2	Dodge	1
Maine	58	Ford	26	Chev	24	D-In	2	*	1				
Maryland	138	Ford	51	Chev	35	In-W	11	B-G	6	Dodge	5	Autocar	4
Michigan	509	Ford	222	Chev	173	Int	40	Dodge	24	GMC	12	Federal	7
Minnesota	145	Ford	64	Chev	46	Int	11	DT	6	D-G	4	Reo	3
Mississippi	73	Ford	43	Chev	17	Int	12	Dodge	1				
Missouri	317	Chev	134	Ford	106	Int	22	Dodge	19	GMC	15	DT	6
Montana	14	Ford	7	Chev	3	G-R-WO	1						
Nebraska	43	Ford	20	Chev	14	Int	5	Dodge	2	DT-WO	1		
Nevada	9	Ford	5	Int	2	C-M	1						
New Hampshire	26	Ford	19	C-DT	2	Int	1						
New Jersey	412	Ford	189	Chev	97	Dodge	24	Int	23	GMC	19	Indiana	10
New Mexico	66	Ford	38	Chev	21	I-In	2	Dodge	1				
New York	765	Ford	304	Chev	156	Int	51	Dodge	42	White	38	DT	25
North Carolina	224	Ford	111	Chev	80	Int	10	Dodge	8	GMC	5	DT	2
North Dakota	7	Ford	3	*	1								
Ohio	752	Ford	317	Chev	189	Int	53	GMC	48	Dodge	42	WO	27
Oklahoma	120	Ford	54	Chev	41	Int	11	Dodge	6	GMC	5	M-S	1
Oregon	50	Ford	30	Chev	11	GMC	6	Int	2	Indiana	1		
Pennsylvania	1340	Ford	545	Chev	303	Int	125	Dodge	94	GMC	66	Reo	26
Rhode Island	86	Ford	34	Federal	18	C-G	10	DIn-R-W	2	*	1		
South Carolina	75	Ford	39	Chev	18	Dodge	5	Int	3	Stude	2	G-M-W	1
South Dakota	29	Ford	16	Chev	7	Int	4	Dodge	1				
Tennessee	122	Chev	50	Ford	46	Int	12	Dodge	4	Federal	3	G-S-W	2
Texas	443	Ford	227	Chev	156	Int	39	GMC	8	Dodge	5	White	3
Utah	13	Chev	6	F-In-R	2	WO	1						
Virginia	201	Ford	112	Chev	54	D-In	9	DT	6	GMC	5	B-R	2
Washington	231	Ford	111	Int	59	Chev	37	GMC	5	D-S	3	M-R	2
West Virginia	128	Ford	58	Chev	38	D-In	9	Indiana	5	GMC	4	*	1
Wisconsin	159	Ford	61	Chev	43	Int	17	Dodge	8	DT-G	6	Reo	5
Wyoming	20	Ford	10	Chev	5	Int	3	Reo	2				
Dist. of Columbia	84	Ford	24	GMC	9	Chev	7	Dodge	4	Federal	3	DT	1

KEY TO ABBREVIATIONS AND SYMBOLS

Au—Austin; A—Autocar; B—Brockway; C—Chrysler; D—Dodge; DT—Diamond T; F—Ford; Fe—Federal; G—GMC; I—Indiana; In—International; LFB—La France-Republic; M—Mack; P—Pierce-Arrow; R—Reo; S—Studebaker; St—Stewart; W—White; WO—Willys-Overland. *All trucks in this position registered only one.